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5(or 6)-**Methoxy-1-piperonylideneindene** (INGOLD and PIGGOTT), T., 1508.

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***p*-Toluacetodinitrile**, oxalic acid derivatives (BENARY, SOENDEROP, and BENNEWITZ), A., i, 573.

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Tolualdehydes, hydroxy-, solubility of (SIDGWICK and ALLOTT), T., 2819.
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*tri*nitro-, freezing point curve of mixtures of picric acid and (TAYLOR and RINKENBACH), A., i, 909.
γ-*tri*nitro-, action of hydroxylamine on (GIUA), A., i, 1189.
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***p*-Toluene-1-azo-β-naphthol-4-sulphonic acid** (MORGAN and JONES), A., i, 327.
Toluene-*p*-4-azo-5-nitro-α-naphthylamine, and its hydrochloride (MORGAN and JONES), A., i, 1029.
1-*p*-Toluenеazo-5-nitro-β-naphthylamine (HOLLIDAY & CO., LTD., and MORGAN), A., i. 388.
Toluene-*p*-sulphinic acid, sodium salt, preparation of (WHITMORE, HAMILTON, and THURMAN), A., i, 501.

Toluene compounds, Me = 1.

Toluene-*p*-sulphinyl chloride, and its derivatives (v. BRAUN and KAISER), A., i, 316.

Toluene-*p*-sulphochloramide, sodium salt, effect of, on organic substances (ENGFELDT), A., i, 454.

Toluene-3-sulphonacetic acid, 4-hydroxy- (GIBSON and SMILES), T., 2391.

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Toluenesulphonic acid, 4-amino-β-naphthyl and 4-nitro-β-naphthyl esters (CHALLENOR and INGOLD), T., 2080.

Toluene-*m*-sulphonic acid, 6-chloro-5-nitro-, sodium salt, as a reagent for potassium (H. and W. DAVIES), T., 2976.

Toluene-*p*-sulphonic acid, halogen-alkyl esters, interaction between organomagnesium halides and (GILMAN and BEABER), A., i, 453.

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Toluenesulphoniodoamides, potassium and sodium salts (ROBERTS), T., 851.

Toluene-ω-sulphonphenylhydrazide, and *p*-chloro- and *p*-nitro- (CLUTTERBUCK and COHEN), T., 2514.

***p*-Toluenesulphonylanthranilic acid,** anhydrides from (HELLER and GRUNDMANN), A., i, 245.

1-*p*-Toluenesulphonyl-3-benzoylamidopiperidone (THOMAS, KAPFHAMMER, and FLASCHENTRÄGER), A., i, 51.

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δ-*p*-Toluenesulphonyl-α-benzoylornithine (THOMAS, KAPFHAMMER, and FLASCHENTRÄGER), A., i, 51.

3-*p*-Toluenesulphonylcarbostyril, and its sodium salt and *O*-ethyl ether (TRÖGER and KÖPPEN-KASTROP), A., i, 370.

α-*p*-Toluenesulphonylcinnamonitrile, *o*-nitro- (TRÖGER and KÖPPEN-KASTROP), A., i, 370.

3-*p*-Toluenesulphonyldiacetoxycoumarins (TRÖGER and DUNKEL), A., i, 357.

Toluene compounds, Me = 1.

3-*p*-Toluenesulphonyl-5:7-diethoxycoumarin (TRÖGER and DUNKEL), A., i, 357.

3-*p*-Toluenesulphonyl*di*hydroxycoumarins (TRÖGER and DUNKEL), A., i, 357.

δ-*p*-Toluenesulphonyl-δ-methylornithine and its hydrochloride (THOMAS, KAPFHAMMER, and FLASCHENTRÄGER), A., i, 51.

2-*p*-Toluenesulphonyl-β-naphthapyrone, and hydroxy- (TRÖGER and DUNKEL), A., i, 356.

3-*p*-Toluenesulphonyl-2-phenylquinoline, and its salts (TRÖGER and v. SEELEN), A., i, 1129.

3-*p*-Toluenesulphonylquinoline, 2-amino-, and its salts, and chloro-derivatives (TRÖGER and KÖPPEN-KASTROP), A., i, 370.

3-*p*-Toluenesulphonyl-2-*p*-toluenesulphonylmethylquinoline (TRÖGER and v. SEELEN), A., i, 1127.

***m*-Toluic acid,** 3-hydroxy-, quinine salt (FARBENFABRIKEN VORM. F. BAYER & Co.), A., i, 939.

***o*-Toluidine,** catalytic preparation of (HENKE and BROWNE), A., i, 201.

***o*-Toluidine,** *p*-bromo- (RESSY and ORTODOCSU), A., i, 833.

Toluidines, ultra-violet absorption spectra of (KLINGSTEDT), A., ii, 106.

β-*o*- and *p*-Toluidinoethyl alcohols (ADAMS and SEGUR), A., i, 458.

2-*p*-Toluidino-5-hydroxy-1:4-naphthaquinone, 3-chloro- (WHEELER, DAWSON, and MCEWEN), A., i, 1021.

1-*o*- and *p*-Toluidino-β-naphthols (WAHL and LANTZ), A., i, 210.

γ-*o*- and *p*-Toluidinopropyl alcohols (PIERCE and ADAMS), A., i, 484.

***p*-Tolumethylamide,** thio- (KINDLER, BURGHARD, FINNDORF, DEHN, GIESE, and KÖRDING), A., i, 571.

β-*p*-Toluoylacrylic acid, methyl ester (ODDY), A., i, 1098.

β-*p*-Toluoyl-Δ$^{\alpha}$-butenoic acid (MAYER and STAMM), A., i, 803.

β-*p*-Toluoyl-*n*-butyric acid, and its oxime (MAYER and STAMM), A., i, 802.

***m*-Toluoylformic acid,** esters and phenylhydrazone of (POSNER and HEUMANN), A., i, 954.

β-*p*-Toluoyl-α-methylacrylic acid (MAYER and STAMM), A., i, 803.

β-*p*-Toluoyl-α-methylpropionic acid, and its oxime (MAYER and STAMM), A., i, 802.

1-*p*-Toluoyl-9-oxanthronyl (SCHOLL, DEHNERT, and SEMP), A., i, 808.

Toluene compounds, Me = 1.

β-*p*-Toluoylpropionic acid, αβ-*di*bromo-, and α-chloro- (ODDY), A., i, 1098.

Tolyl acetate and benzoate, bromo- and *di*bromo-amino-, acetyl and benzoyl derivatives (RAIFORD and IDDLES), A., i, 326.

***m*-Tolyl** methyl ether, sulphonic acids of (HAWORTH and LAPWORTH), T., 2982.

amino-, acetyl derivatives (HAWORTH and LAPWORTH), T., 2987.

4:6-*di*bromo- (HAWORTH and LAPWORTH), T., 2995.

2-nitro- (GIBSON), T., 1273.

***p*-Tolyl** acetonyl sulphide, and its derivatives (TRÖGER and v. SEELEN), A., i, 1128.

1-*p*-Tolylamino-β-naphthol (SOCIÉTÉ ANONYME DES MATIÈRES COLORANTES, WAHL, and LANTZ), A., i, 919.

Tolylanthranyl acetate (BARNETT and COOK), T., 2639.

Tolylarsinic acids, hydroxy- (CHRISTIANSEN), A., i, 500.

l-m-**Tolylasparagine** (LUTZ), A., i, 457.

***m*-Tolylaziminobenzene**, 2′:4′- and 4′:6′-*di*nitro- (MICHELE and MARIO GIUA), A., i, 485.

***N*-*p*-Tolylbenziminophenyl** ether hydrochloride (CHAPMAN), T., 1153.

β-*o*-Tolyl-α-benzylidenetetrazan-γδ-dicarboxylic acid, ethyl ester (BUSCH, MÜLLER, and SCHWARZ), A., i, 867.

***p*-Tolylboric acid** (KRAUSE), A., i, 1035.

***o*-Tolylcarbamic acid**, γ-chloropropyl ester (DOX and YODER), A., i, 484.

***o*- and *p*-Tolylcarbamic acids**, β-chloroethyl esters (ADAMS and SEGUR), A., i, 457.

γ-chloropropyl esters (PIERCE and ADAMS), A., i, 484.

9-Tolylcarbazole, *m*-nitro- (G. and M. DE MONTMOLLIN), A., i, 374.

1-*p*-Tolyl-1:2:3:4-carboxylic acid, 5-chloro- and 5-hydroxy-, ethyl esters (DUTT), T., 273.

***p*-Tolyl*tri*chloromethylcarbinol** (PAULY and SCHANZ), A., i, 564.

2:6-Tolylenediamine, dithioacetyl derivative (EDGE), T., 1013.

β-*o*-Tolylethyl alcohol (v. BRAUN and ZOBEL), A., i, 1200.

β-*o*-Tolylethyl bromide (v. BRAUN, ZOBEL, and KÜHN), A., i, 1201.

α-*p*-Tolyl-*n*-ethylcarbamide (BOEHRINGER & SÖHNE), A., i, 949.

***p*-Tolylglucoside**, 3-nitro-, and its acetate (GLASER and PRÜFER), A., i, 694.

Toluene compounds, Me = 1.

β-*o*-Tolyl-α-hydroxybenzylidenetetrazan-γδ-dicarboxylic acid, ethyl ester (BUSCH, MÜLLER, and SCHWARZ), A., i, 867.

***m*-Tolylhydroxylamine**, β-4:6-*di*nitro-, and its acetyl derivative (GIUA), A., i, 1190.

***p*-Tolyl-γ-hydroxypropylamine** (DAINS, BREWSTER, BLAIR, and THOMPSON), A., i, 63.

2-*p*-Tolylimino-5-hydroxy-3-*p*-tolylthiazan, and its salts (DAINS, BREWSTER, BLAIR, and THOMPSON), A., i, 63.

2:5-*p*-Tolylimino-1-phenyldihydro-1:2:3-triazole (DUTT), T., 274.

2-*p*-Tolylimino-3-phenyl-5-methylthiazolidine, and its picrate (DAINS, BREWSTER, BLAIR, and THOMPSON), A., i, 63.

2-*p*-Tolylimino-3-phenylthiazan (DAINS, BREWSTER, BLAIR, and THOMPSON), A., i, 63.

2-*o*- and -*p*-Tolylimino-3-phenylthiazolidine (DAINS, BREWSTER, BLAIR, and THOMPSON), A., i, 63.

***m*- and *p*-Tolyliminosuccino-*m*- and *p*-tolils** (CHATTAWAY and PARKES), T., 667.

2-*p*-Tolylimino-3-*p*-tolyl-5-methylthiazolidine, and its picrate (DAINS, BREWSTER, BLAIR, and THOMPSON), A., i, 63.

2-*p*-Tolylimino-3-*p*-tolylthiazan (DAINS, BREWSTER, BLAIR, and THOMPSON), A., i, 63.

***o*- and *p*-Tolylindanylamines** (COURTOT and DONDELINGER), A., i, 1090.

2-Tolyl-5-methyl-2:1:3-benztriazoles, 6-nitro-, and their *N*-oxides (MICHELE and MARIO GIUA), A., i, 610.

γ-*p*-Tolyl-α- and -β-methyl-*m*-butyric acids, and their derivatives (MEYER and STAMM), A., i, 803.

2-*p*-Tolyl-4-methylpyrimidine-5-carboxylic acid, and its ethyl ester (MITTER and BARDHAN), T., 2181.

***p*-Tolyl-αβ-naphthatriazole**, 6-amino-, and 6-nitro- (HOLLIDAY & CO., LTD., and MORGAN), A., i, 388.

2-*p*-Tolyl-αβ-naphthatriazole-6-azo-β-naphthol (HOLLIDAY & CO., LTD., and MORGAN), A., i, 389.

1-*p*-Tolylnaphthylamine, 2-hydroxy- (SOCIÉTÉ ANONMYE DES MATIÈRES COLORANTES, WAHL, and LANTZ), A., i, 674.

3-*o*- and *p*-Tolyl-2-oxazolidones (ADAMS and SEGUR), A., i, 457.

Tolyloxide, sodium, estimation of cresols in (ISNARD), A., ii, 343.

Toluene compounds, Me = 1.

w-o-**Tolylphenylacetic acid**, ethyl ester (v. BRAUN and ZOBEL), A., i, 1200.

m-**Tolylphenylenediamines**, *di*nitro-, and their acetyl derivatives and benzylidene-imines (MICHELE and MARIO GIUA), A., i, 485.

3-*o*- and *p*-**Tolyltetrahydro-1:3:2-oxazones** (PIERCE and ADAMS), A., i, 484.

Tolylthiocarbimides (DAINS, BREWSTER, and OLANDER), A., i, 324.

m-**Tolylthiolacetic acid**, 5-chloro- and 5-chloro-2-amino- (FARBWERKE VORM. MEISTER, LUCIUS, & BRÜNING), A., i, 794.

β-p-**Tolylthiol-β-phenylpropionic acid**, and its sodium salt (ARNDT, FLEMMING, SCHOLZ, and LÖWENSOHN), A., i, 826.

βp-**Tolylthiolpropionic acid** (ARNDT, FLEMMING, SCHOLZ, and LÖWENSOHN), A., i, 827.

o-**Tolylurethane**, 3- or 5-*mono*-, and 3:5- and 4:5-*di*-nitro- (RYAN and CULLINANE), A., i, 322.

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Trees, constituents of bark and wood of, in spring growth (RIPPEL), A., i, 521.

Trehalose, preparation of (HARDING), A., i, 1064.

barium phosphate and sulphate of (HELFERICH, LÖWA, NIPPE, and RIEDEL), A., i, 898.

*tetra*chlorohydrin disulphate (HELFERICH, LÖWA, NIPPE, and RIEDEL), A., i, 655.

2:3:4-Triacetoxybenzoic acid (PACSU), A., i, 339.

Triacetoxycymenes (BARGELLINI), A., i, 784.

Triacetyl-*p*-di-β-resorcylic acid (PACSU), A., i, 339.

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5′:7:8-Trianilino-2′-hydroxy-2-phenylphenanthriminazole (A. C. and G. C. SIRCAR), T., 1565.

Triaquopiperidinemagnesium sulphate (SPACU and RIPAN), A., ii, 73.

Triaquotriamminemagnesium sulphate. See under Magnesium.

Triarylmethane colouring matters, preparation of (BRITISH DYESTUFFS CORPORATION, LTD., BADDILEY, and RODD), A., i, 148.

Triazole, 3-hydroxy-5-thiol-, lead and phenylhydrazine salts (FROMM and NEHRING), A., i, 859.

1:2:4-Triazole, derivatives of (GASTALDI), A., i, 1236, 1237.

1:2:4-Triazole, 3:4-*di*amino-5-thiol-, and its derivatives (FROMM, LAYER, and NERZ), A., i, 1239.

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Triazomesityleneindazole (MORGAN and DAVIES), T., 232.

Triazonitroaminomesitylene (MORGAN and DAVIES), T., 235.

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Tribenzylidene *tri*sulphoxide (FROMM and SCHULTIS), A., i, 581.

Tribenzylideneoxide sulphide sulphone, or *di*sulphoxide (FROMM and SCHULTIS), A., i, 581.

Tribenzylidenetrisulphone, and its salts and derivatives (FROMM and SCHULTIS), A., i, 581.

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Tridecanaphthenic acid, and its methyl ester (TANAKA and NAGAI), A., i, 464.

Triethylammonium dimercuribromide (HANN), A., i, 901.

Triethylene *tri*- and *tetra*-sulphides, and their derivatives (RÂY), T., 2174.

Triethylenedisulphone sulphide (RÂY), T., 2177.

Triethylenedisulphonedisulphonic acid, barium salt (RÂY), T., 2176.

Triethylenetrisulphone (RÂY), T., 2177.

2:2:4-Triethyltetrahydronaphth-αβ-diketohydrindene (FLEISCHER and RETZE), A., i, 221.

2:2:4 Triethyltetrahydronaphth-αβ-hydrindene (FLEISCHER and RETZE), A., i, 221.

3:5:10-Triketo-2:3-dihydronaphthathiazine (FRIES and OCHWAT), A., i, 843.

Triketohydrindene 2-dioxime, and its derivatives (PONZIO and PICHETTO), A., i, 471.

Triketohydrindene reaction (SADIKOV and ZELINSKI), A., ii, 888.

3:7:8-Trimethoxy-2-methylanthraquinones (BISTRZYCKI and KRAUER), A., i, 1210.

3:7:8-Trimethoxymethyl-10-anthrones (BISTRZYCKI and KRAUER), A., i, 1210.

4′:5:6-Trimethoxymethylbenzophenone-2-carboxylic acids (BISTRZYCKI and KRAUER), A., i, 1210.

4′:5:6-Trimethoxymethyldiphenylmethane-2-carboxylic acids (BISTRZYCKI and KRAUER), A., i, 1210.

1:3:5-Trimethoxynicotinonitrile (SCHROETER and SEIDLER), A., i, 1124.

3:2′:4′- and 3:3′:4′-Trimethoxy-2-phenylbenzopyrylium ferrichlorides, 7-hydroxy- (PRATT and ROBINSON), T., 757.

α-Trimethoxyphenylethane, β-amino-α-hydroxy-, salts (HINSBERG), A., i, 556.

Trimethylacetaldehyde. See **αα-Dimethylpropaldehyde.**

ααγ-Trimethylaconitic acid, and its anhydride (GRIMWOOD, INGOLD, and THORPE), T., 3308.

3:5:7-Trimethylacridine, and its salts (MORGAN and HICKINBOTTOM), T., 103.

Trimethylamine, addition of *p*-nitrobenzyl chloride to (DEXTER, MCCOMBIE, and SCARBOROUGH), T., 1237.

Trimethylammonium mercuribromide (HANN), A., i, 901.

2:2′ 2″- and **3:3′:3‴-Trimethylaurin** (BAINES and DRIVER), T., 1217.

2:4:6-Trimethylbenzbisthiazole, and its methiodide (EDGE), T., 1013.

2:4:7-Trimethylbenzisothiazole, and its hydrochloride (EDGE), T., 155.

ω-*ms*-ω′-Trimethylbiuret, and its derivatives (BILTZ and JELTSCH), A., i, 1075.

βγγ-Trimethylbutane-αβ-diol (FAVORSKI and OPEL) A., i, 431.

Trimethyl-Δβ-butenylammonium bromide (v. BRAUN and SCHIRMACHER), A., i, 286.

Trimethyl-*n*-butylammonium bromide (v. BRAUN and SCHIRMACHER), A., i, 286.

Trimethylcarbinol, binary systems with (KREMANN, MAUERMANN, MÜLLER, and RÖSLER), A., i, 332.

Trimethylcarbinyl chromate (WIENHAUS and TREIBS), A., i, 893.

3:4:7-Trimethylcoumarin-6-sulphonic acid, and its salts and sulphonyl chloride (KRÜGER), A., i, 355.

Trimethylene bis-β-phenoxy-*o*-ethoxyphenyl ether (KOHN and SAFRIN), A., i, 559.

γ-bromopropyloxyphenyl allyloxyphenyl ether (WILSON and ADAMS), A., i, 328.

***tris*ulphide** (HINSBERG), A., i, 1056.

***di-* and *tetra*-iodides** (FROMM and SCHULTIS), A., i, 581.

Trimethylene glycol, nitro-, degradation of (WILKENDORF and TRÉNEL), A., i, 288.

2:3-Trimethylene-5:6-tetramethylenepyridine, and its salts (v. BRAUN, PETZOLD, and SCHULTHEISS), A., i, 837.

Trimethylethylpurpurogallins (HERZIG), A., i, 806.

αββ-Trimethylglutaric acid, preparation and bromination of, and its derivatives (PANDYA and THORPE), T., 2858.

ββζ-Trimethylheptane (KISHNER), A., i, 385.

Trimethylmannan, preparation of (PATTERSON), T., 1147.

Trimethylmannose (PATTERSON), T., 1148.

2:3:6-Trimethyl-β-methylglucoside, and its acetyl and benzoyl derivatives (SCHLUBACH, MOOG, and FIRGAU), A., i, 1064.

1:2:2-Trimethyl*cyclo*pentane-1-carboxylic acid, *d-cis*-3-amino-, methyl ester, hydrochloride (SKINNER), A., i, 791.

Trimethyl*cyclo*pentane-1-carboxylic acid, *mono-* and *di*-hydroxy-, and their derivatives (SKINNER), A., i, 792.

1:1:3-Trimethyl*cyclo*pentane-2:4-dione, and its derivatives (DE ROSANBO), A., i, 1019.

ββγ-Trimethylpentan-γ-ol-δ-one, and its derivatives (LOCQUIN and WOUSENG), A., i, 302.

Trimethyl*dicyclo*pentan-3-one-1:2:4-tricarboxylic acids, ethyl esters (TOIVONEN), A., i, 1017.

2:5:5-Trimethyl-Δ¹-*cyclo*pentene-3:4-dione-1-carboxylic acid (GRIMWOOD, INGOLD, and THORPE), T., 3308.

2:5:5-Trimethyl-Δ¹-*cyclo*penten-3-one-1-carboxylic acid, *di*chloro-, and 4-oximino- (GRIMWOOD, INGOLD, and THORPE), T., 3307.

1:3:3-Trimethyl*cyclo*propan-2-ol-1:2-dicarboxylactone (PANDYA and THORPE), T., 2864.

1:2:7-Trimethylpurine, 6-hydroxy- (TRAUBE), A., i, 1137.

2:3:5-Trimethylpyrrole, 4-amino-, and its salts (FISCHER and ROTHWEILER), A., i, 392.

2:3:5-Trimethylpyrrole, 4-cyano- (FISCHER and ZERWECK), A., i, 365.
2:3:5-Trimethylpyrrole-4-aldehyde, and its derivatives (FISCHER and ZERWECK), A., i, 364.
2:3:5-Trimethylpyrrole-4-benzoylaminoacrylic acid (FISCHER and ZERWECK), A., i, 364.
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ERRATA.

Vol. 82 (Abstr., 1902).

Page Line
i. 31 13* *for* "favour" *read* "retard."

Vol. 98 (Abstr., 1910).

i. 532 6* *for* "When X" *read* "When R."
3* ,, "magnesium derivative of bromoquinol dimethyl ether" *read* "bromomagnesium derivative of quinol dimethyl ether."

Vol. 124 (Abstr., 1923).

i. 171 8* *for* "Blanch" *read* "Blanck."
i. 449 24* ,, "Calvary" *read* "Calvery."
i. 613 19 ,, "Moggo" *read* "Moggi."
i. 660 28 ,, "$\beta\gamma$-diaminopropionic acid" *read* "$\alpha\beta$-diaminopropionic acid."
i. 756 6 ,, "Hentikka" *read* "Hintikka."
i. 1124 22 and 23 for "5-*chloro*-1:3-*dihydroxynicotinonitrile*" read "6-*chloro*-2:4-*dihydroxynicotinonitrile*."
20* ,, "1:3:5-" *read* "2:4:6-" (in each case).
18* ,, "5-*chloro*-1:3-*dihydroxynicotinamide*" read "6-*chloro*-2:4-*dihydroxynicotinamide*."
8* ,, "5-*chloro*-1:3-*dimethoxynicotinonitrile*" read "6-*chloro*-2:4-*dimethoxynicotinonitrile*."
3* ,, "1:3:5-" *read* "2:4:6-"
ii. 11 16* *for* "Politzer" *read* "Pollitzer."
ii. 32 21, 22 ,, "face centered cube" *read* "hexagonal close packed."
ii. 186 11* ,, "acetic" *read* "tartaric."
ii. 214 15* ,, "freed" *read* "free."
14* *delete* "by passing it through a tube immersed in liquid air."
ii. 440 2* ,, "Thalhimer" *read* "Thallinner."
ii. 443 12 ,, "Nanusso" *read* "Nanussi."
ii. 535 10 ,, "Viehaener" *read* "Viehoever."
ii. 717 1 ,, "unable" *read* "able."

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209 col. i. last two entries should be under "**Dale**, *Henry Hallett*, and *Harold Ward* **Dudley**" in col. ii.

* From bottom.